

§Appl. No. 10/009,635  
Amdt. dated June 2, 2004  
Reply to Office Action of, December 2, 2003

**Listing of Claims:**

**Claim 1 (Currently Amended)** An analytical ~~Analytical~~ unit for sample preparation of a sample of a predetermined volume, at least comprising: a ~~continuous-flow~~ flow through unit made of plastic having a microstructured channel system; therein; an adaptor chamber for reversibly receiving the ~~continuous-flow~~ flow through unit; ; a fluidics supply; for supplying the sample to the flow through unit; a power supply; and at least one detector, and characterized in that to receive the sample a sample channel section in the flow through unit for receiving the sample, is provided at the ends of which in each case are situated fluidic connections. the sample channel section having openings at two ends thereof both of which have at least one fluidic connection to determine therebetween a volume in the sample channel section, which volume defines the volume of a sample to be analyzed.

**Claim 2 (Currently Amended)** The analytical ~~Analytical~~ unit according to Claim 1, ~~characterized in that~~ wherein integrated into the analytical unit is a discharging ~~an~~ apparatus for discharging sample volumes, which discharging apparatus ~~essentially consists of~~ comprises a channel system having at least one Y branch having legs extending from a branching point; ~~at least three~~ transport electrodes and associated with the legs of the Y branch; at least one detection apparatus upstream of the ~~said branching point of the channel system~~ and an electrical switching apparatus connected to the electrodes.

**Claim 3 (Currently Amended)** Analytical unit according to Claim 1 ~~or 2,~~ characterized in that , wherein the fluidic connections are defined by outlets or inlets to peristaltic pumps, syringes or syringe pumps.

§Appl. No. 10/009,635  
Amdt. dated June 2, 2004  
Reply to Office Action of, December 2, 2003

**Claim 4** (Currently Amended) ~~Use of the~~ The analytical unit according to claim 1 ~~including electrodes in further channels to one of Claims 1 to 3~~ for isotachophoretic separation of a portion of the predetermined volume of the a sample.

**Claim 5** (Currently Amended) ~~Use of the~~ The analytical unit according to ~~one of Claims 1 to 3~~ Claim 1 comprising a depletor for depleting matrix components from ~~a primary the~~ sample, an extractor for extracting analytes from ~~a primary the~~ sample, a separator for separating off analytes from the ~~primary~~ sample or an enricher for enriching ~~of~~ analytes in minor amounts.

**Claim 6** (New) The analytical unit of claim 1 wherein the sample channel section has constructions at the ends thereof proximate the fluidic connections.

**Claim 7** (New) The analytical unit of claim 1 wherein the flow through unit further includes additional channel sections connected to the sample channel section for containing buffer solutions therein which retain the sample in the sample channel section.

**Claim 8** (New) The analytical unit of claim 1 wherein the sample has a volume of more than 0.1 $\mu$ l.

**Claim 9** (New) The analytical unit of claim 1 wherein the sample volume is a range from 0.1 $\mu$ l to 20 $\mu$ l.